

**BIOL 1010-001 "Principles of Biology"**  
**CSU Stanislaus - Course Syllabus**

**Instructor:** Dr. Jason Baumsteiger

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**Office Hours:** M&F 11-12; W10-11am; or by appointment.

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**Lectures:** MWF 1-1:50pm, Demergasso-Bava Hall P167 (amphitheater with technology)

**Course Description:** This course satisfies the B2 (biological science) lower division general education requirement. We will explore basic biological phenomena as they relate to all living organisms, specifically (1) molecules and cells, (2) genetics, (3) evolution and (4) ecology. We do not cover physiology in this course; that area of biology is more appropriate for pre-med or pre-health students. Nor are we going as deep into topics we will cover as the biology majors do. That said we will cover a lot of material! We will meet face-to-face twice a week, and you will access an online platform called Mastering Biology several times weekly to reinforce concepts covered in class. I will ask you to think at high cognitive levels beyond the basic memorization of facts, and how to apply what you learn in this class to choices you make in your life. **This course is rather fast paced and vocabulary intensive.** If you are currently in or still need to take a remedial English course (ENGL 1000, ENGL 1001, ENGL 1006), please consider taking BIOL 1010 another time.

**Lab:** There is no laboratory requirement for this course, but I highly recommend that you take BIOL 1020 this semester if at all possible! I am a firm believer in reinforcing concepts learned in lecture with activities in lab that illustrate these concepts. Data support the hypothesis that students in BIOL 1010 do better if they take BIOL 1020 in the same semester.

**Text:** *Campbell Essential Biology CSUS Custom Edition (a.k.a. Campbell Essential Biology, 5<sup>th</sup> ed.)* by Simon, Reese and Dickey. The one you get at CSUS bookstore says "Custom Edition" and has a mostly red cover, but you can also find the "regular" version easily online (that version has a large green praying mantis on it).

**Announcements:** Check BlackBoard for updates, lecture slides, study guides, etc.

**Course Goals:** As this course is a General Education course, the overarching goals of the course are to:

1. *Develop the skills and competencies necessary to effectively participate in our society and the world* (this includes demonstrating effective oral and written communication, thinking logically, creatively and critically, applying quantitative reason and skills to solve problems, and use technology effectively to gather and communicate information).
2. *Develop an understanding of the contribution to human knowledge and culture of the biological sciences* (this includes applying the scientific method, demonstrate understanding of living and non-living aspects of the world you live in, of human cultural and scientific endeavors, and the structures and institutions that frame human interactions).

More specific to this class, after completing it you should be able to

1. *Demonstrate your ability to think like a biologist.*
2. *Speak & write coherently about biology,* with biologists and non-biologists alike.
3. *Apply biological knowledge for making informed decisions* in your life.

**My Teaching Philosophy:** My teaching philosophy is grounded in high expectations, accountability, and the expectation of appropriate behavior conducive to learning. Five principles guide my teaching philosophy:

1. All students can become lifelong learners.
2. Significant change requires commitment and time.
3. Struggle is a necessary and important part of life.
4. Students must accept responsibility for their learning progress.
5. I will never do for students what students can do for themselves.

That said, I will work hard and use multiple ways of learning to help you succeed in this course. Hopefully we'll also have a few laughs as we go along.

**Participation and Attendance:** Please arrive to class on time and ready to learn. I expect all students to attend every class session. There is plenty of research that shows final grades are positively correlated with attendance. To this end you will be able to earn *classroom activity* points in every class meeting, but cannot make them up if you are absent. Thus, if you miss more than two class meetings, your final grade will be negatively affected! Assignments are due at the start of class (or on your way out if we did it in class). You will talk and work frequently in small groups, and sometimes present your ideas to the entire class. Most importantly, please do not disrupt the learning environment, rights, and property of others. Of course, all gadgets not conducive to learning in the course, such as cell phones/iPods/etc. should be turned off during class. Be honest, hold yourself accountable for your actions, and hold me accountable for mine.

**Respectful Classroom Atmosphere:** This class is a “judgment-free zone” at all times. This means that when you disagree with somebody’s opinion on a subject, you do not have the right to sling insults, raise your voice, or criticize them. I most certainly encourage disagreement on controversial topics and conversations are livelier if people do disagree on a subject. However, polite civil disagreement and outright hostility are two very different things. I will not tolerate hostility in the classroom, and anyone participating in this behavior will be escorted out of the room and not allowed to return for the rest of the class period.

**Evolution:** “Respect for data, comfort in faith.” Someone much wiser than me came up with this saying. If you can live by it then you’ll be fine in this class. Evolution and natural selection are central tenets of biology and will be critical aspects of this course, openly discussed and referred to frequently.

**Math:** Every biologist uses math and statistics. In this course you will use some math as it applies to biology. This mostly includes making and interpreting graphs, but may also include calculating averages and variation around an average. I will help you and there will be chances to practice. NOTE: a calculator is good for this class.

**iClickers:** You will need to purchase/reuse/rent an iClicker remote. Register it at [www1.iclicker.com/register-an-iclicker](http://www1.iclicker.com/register-an-iclicker) . Expect to use it most days in class.

**Assignments:** During final review lecture for each midterm/final you will submit a summary of major course content covered during that midterm section. See the document “Summary Rubric” on BlackBoard for more information on summaries. Other assignments will come in the form of Mastering Biology before and after each class and clicker questions. If you are absent from class, you cannot make up the clicker points.

**Mastering Biology:** If you buy the textbook new from the CSU Stan bookstore, you also then have access to the website Mastering Biology ([www.masteringbiology.com](http://www.masteringbiology.com)). If you buy the book used or get it from a friend, you will have to purchase an account on the Mastering Biology website. Either way, you must create a Mastering Biology (MB) account, as you will access it regularly before and after each class. Check Blackboard for a useful file on how to log in to MB and create an account. You will need the following instructor code to add my specific MB course: \_\_\_\_\_. I will track your access and use of MB, and points earned on the MB website will figure into your final grade.

**Exams:** There are three midterms and one final exam. The final will be comprehensive (~35% old material, ~65% new material since the last midterm). Exams will consist of multiple choice and short answer questions. You will need a scantron form for all exams. Requests for early exams must be submitted in writing prior to the scheduled exam, with evidence of your hardship. If you miss an exam and have to make it up, you will also need to provide some evidence of hardship. **No makeup exams will be given after graded exams are returned to the class.**

**Cheating and Plagiarism:** Don't do it! Your work should reflect your own effort and words. Any verified instance of cheating and/or plagiarism will be directed to the Office of Judicial Affairs.

**Special Accommodations and Recording Lectures:** This course is ADA accessible. Students with documented disabilities should seek special accommodations for all classes through the Disability Resource Services office on campus. If DRS notifies me that you require ADA accommodations, then I will provide them for you, such as permission to record lectures. Otherwise, you have to do it the old-fashioned way with pen and paper. If you record my class in any form (video, audio, still pictures, etc.) without accommodation from DRS, that constitutes intellectual property theft and will be a bad situation for all involved. Student athletes who will miss class for games/matches should have their coach contact me, and I will accommodate your schedule by allowing alternate test dates and/or excusing points missed in class.

**Grades:** There are 700 points possible in this course:

Activity/Assignment	Points	% of Total Points
Midterm Exams (100ptsx3)	300	43%
Final Exam	150	21.4%
Summaries (25ptsx4)	100	14.3%
Mastering Biology	100	14.3%
Clicker Questions	50	7%
<b>TOTAL</b>	<b>700</b>	<b>100%</b>

I calculate grades as a percentage of the total. **I give + and – grades** as follows:

100-93 = A	93 – 88 = A-	
88 – 86 = B+	86 – 83 = B	83 – 78 = B-
78 - 76 = C+	76 - 73 = C	73 - 68 = C-
68 - 66 = D+	66 - 63 = D	63 – 58 = D-
58 - below = F		
CR = 68 or higher		NC = 68 or lower

**Important Dates:** The last day to add the class is Feb 6<sup>th</sup>. Census Date is Feb. 23<sup>rd</sup>. This is the last day to drop the course or change your grading option without my signature; it is your responsibility to submit

the grade change form to Admissions and Records by 5pm that day. After your Midterm II is returned is the last day to change your grading option with my signature. I strictly adhere to the grading option Academic Records has on file for you when I submit final grades. I will not change grades once final grades have been submitted.

**Getting Help & Study Skills:** The following suggestions may help you succeed:

- 1) **Read** the chapter before class and bring your questions to class.
- 2) **Attend** class and participate actively.
- 3) **Complete all assignments** and turn them in on time.
- 4) **Take notes** in a way that is helpful to you, even if you have to use a lot of paper.
- 5) **Join a study group!** Students who study in groups tend to do better than those that study alone.
- 6) **Study** for the exams well before the morning of the exam.
- 7) **Go to bed early** the night before and get up early the day of exams.
- 8) **Learn how you learn** and then stick with a style or process that is successful for you.

Learning takes time and is difficult (impossible?) to do in a single session before an exam.

**Form a study group that meets regularly** so you can talk about new concepts and review terminology.

When studying for exams, focus primarily on lecture notes, Mastering Biology, and the assigned text readings.

There is help on campus for students struggling with biology!

1. There will supplemental instruction for this course.
2. The Central Valley Math & Science Alliance, located in 124 Naraghi Hall, is a free walk-in science and math tutoring center. With both student and faculty tutors available from 8am – 6pm daily, there should be someone available to answer your questions.
3. The Biology Club is a group of students who have gone through general biology courses and they are willing to offer advice and help, especially if you buy them coffee or bring them cookies.
4. Tutoring Services on the ground floor of the CSUS Library (L-112) has drop-in tutoring for biology; check their office or website for their schedule.
5. The Advising Resource Center
6. Student Support Services
7. The Program for Academic and Career Excellence (P.A.C.E.) in the MSR Building may be a useful source of aid for you.

Of course, I will work hard to help you in class and out. Come to office hours, communicate with me and let me know your frustrations and I will respond.

**Tentative Lecture Schedule:**

WEEK	Lecture	DATES	TOPICS	Chp.	Pages
1	1	Jan 28	Syllabus		
	2	Jan 30	General Biology	1	All
2	3	Feb 2	Chemistry	2	22-28
	4	Feb 4	Chemistry/Water/pH	2	29-32
	5	Feb 6	Building Blocks	3	All
3	6	Feb 9	Cells	4	All
	7	Feb 11	Energy 1	5	75-80
	8	Feb 13	Energy 2	5	83-87
4	9	Feb 16	Cell Photosynthesis	7	All
	10	Feb 18	Cell Respiration	6	All
	11	Feb 20	Review		<b>MB#1 Due</b>
5		<b>Feb 23</b>	<b>Midterm I</b>	<b>1 - 7</b>	<b>Summary #1 Due</b>
	12	Feb 25	Structure of DNA	10	173-187
	13	Feb 27	Chromosomes	10	173-187
6	14	Mar2	Viruses	10	188-194
	15	Mar4	Mitosis 1	8	123-126
	16	Mar6	Mitosis 2 and Cancer	8	128-130; 211-215
7	17	Mar9	Meiosis	8	130-135
	18	Mar11	Heredity 1	9	145-156
	19	Mar13	Heredity 2	9	157-167
8	20	Mar16	Genetic Control	11	All
	21	Mar18	DNA Technology	12	All
	22	Mar20	Review		<b>MB#2 Due</b>
9		<b>Mar23</b>	<b>Midterm II</b>	<b>8-12</b>	<b>Summary #2 Due</b>
	23	Mar25	Evolution 1	13	All
	24	Mar27	Evolution 2	13	All
10	25	Mar30	Evolution 3	14	All
	26	Apr1	Evolution 4	14	All
	27	Apr3	Micro	15	All
11		<b>Apr6-10</b>	<b>SPRING BREAK</b>		
12	28	Apr13	Plants	16	All
	29	Apr15	Animals	17	336-360
	30	Apr17	Animals - Humans	17	361-367
13	31	Apr20	Review		<b>MB#3 Due</b>
		<b>Apr22</b>	<b>Midterm III</b>	<b>13-17</b>	<b>Summary #3 Due</b>
14	32	Apr24	Intro to Ecology 1	18	373-375
	33	Apr27	Intro to Ecology 2	18	376-392
	34	Apr29	Intro to Ecology 3	18	393-399
15	35	May1	Animal Behavior 1		Not in Book
	36	May4	Animal Behavior 2		Not in Book
	37	May6	Populations 1	19	403-411
16	38	May8	Populations 2	19	412, 417-420
	39	May11	Communities 1	20	425-436
	40	May13	Communities 2	20	437-448
17	41	May15	Review		<b>MB#4 Due</b>
		<b>May18-22</b>	<b>Finals Week</b>	<b>Any listed above</b>	
			<b>Friday May 22<sup>nd</sup> 11:15 – 1:15pm</b>		<b>Summary #4 Due</b>